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ABSTRACTS



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Imidacloprid 17.8 SL @ 0.28ml/l recorded maximum of 96.30 % pupation followed by buprofezin 25SC@ 1ml/l (91.67 %) and highest adult emergence was noticed in imidacloprid 17.8 SL @ 0.28ml/l and buprofezin 25SC@ 1ml/l of 93.83 and 90.59 %, respectively by contact toxicity.

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Effect of New Insecticide Molecules against Cucurbit Fly *Bactrocera cucurbitae* (Tephritidae: Diptera)

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The experiment was carried out at Entomology section farm, College of Agriculture, Pune, Maharashtra, India and was laid out in randomized block design with three replications. Among the seven insecticides tested spinosad (0.002%) was found most effective for control of fruit fly infestation cucumber and also recorded highest yield of marketable fruits. It was followed by cartap hydrochloride (0.05%) and NSKE (5%), which were on par with each other in effectiveness. For maximum net additional returns, spraying of spinosad (0.0025%) may be suggested for the control of *B. cucurbitae* on cucumber. In general, spraying of cartap hydrochloride at the rate of 0.05% can be recommended as most effective chemical for control of fruit fly, *B. cucurbitae*.

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Population Dynamics of *Spodoptera litura* and *Helicoverpa armigera* on Groundnut

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Groundnut (*Arachis hypogaea* L.) is an important oil seed crop which is affected by both biotic and abiotic factors. Among the biotic factors, particularly insect-pests, the tobacco caterpillar, *Spodoptera litura* (Fab.) and the gram pod borer, *Helicoverpa armigera* (Hub.) are important. Hence, the present study was under taken to know the seasonal incidence of these pest species on groundnut. The male moths which were caught in the pheromone traps were recorded at weekly intervals during standard weeks of 2010 and 2011. The pooled data were analyzed for correlation and regression using DSAASTAT software (Onobri, 2007). The population of *S. litura* attained two peaks, the first peak was observed during first standard week (15.0 moths/trap/week) followed by decline in moth catches to a level of zero on 12th week. The population again found to appear from 18th standard week onwards and reached its second peak during 40th standard week (30.5 moths/trap/week). The population of *H. armigera* reached a peak during 46th standard week (5.5 moths/trap/week). There were no moths of *H. armigera* caught in the traps from 6th to 28th standard weeks. Correlation studies revealed that *S. litura* population had a positive correlation with morning and evening relative humidity (RH), sunshine hours and rainfall, whereas population of *H. armigera* showed positive correlation with morning and evening RH and sunshine hours only. The values of co-efficient of determination (R^2) indicated a variation in trap catch of 32 per cent in *S. litura* and were influenced by RH, sunshine hours and rainfall, whereas variation of 35 per cent in *H. armigera* was influenced by RH and sunshine hours. The *S. litura* moth catches were highest in 42nd standard week on groundnut and there was a positive correlation with temperature and sunshine hours (Gedia *et al.*, 2007). The *H. armigera* had a highest moth catch during 51st standard week on pigeonpea (Rajesh and Durairaj, 2012). The study infers that both the *S. litura* and *H. armigera* populations have followed the definite peaks of moth emergences hence, management practices may be planned accordingly to bring down their populations below the economic threshold levels.